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ABSTRACT

Subjects were four groups of 12 college women, high or low in motive to avoid success (MAS) and locus of control (LC), were reinforced for response A on a fixed partial reinforcement schedule on three concept learning tasks, one task consisting of combined reward and punishment, another of reward only, and one of punishment only. Response B was never reinforced, and its frequency constituted the reinforcement avoidance score. High MAS, internal LC subjects avoided reward more than punishment, and high MAS, external LC subjects avoided punishment more than reward. In high MAS subjects, internal LC appears to increase, and external LC to decrease, success avoidance in achievement situations. (Author)

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Motive to Avoid Success, Locus of Control, and Reinforcement Avoidance *

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Abstract

Four groups of twelve college women, high or low in motive to avoid success (MAS) and locus of control (LC), were reinforced for response A on a fixed partial reinforcement schedule on three concept learning tasks, one task consisting of combined reward and punishment, another of reward only, and one of punishment only. Response B was never reinforced, and its frequency constituted the reinforcement avoidance score. High MAS, internal LC subjects avoided reward more than punishment, and high MAS, external LC subjects avoided punishment more than reward. In high MAS subjects, internal LC appears to increase, and external LC to decrease, success avoidance in achievement situations.

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Two variables which recent research has associated with defensive behavior are motivation to avoid success (Horner, 1968) and generalized expectancy for internal versus external control of reinforcements, or locus of control (Rotter, 1966). The first refers to a need to refrain from utilizing one's abilities maximally in achievement situations to avoid performing successfully, presumably because of expected social rejection, or other negative consequences, associated with success. The motive to avoid success has been attributed chiefly to women because of the conflict that often exists between social definitions of femininity and successful career achievement by women. The second variable, locus of control, describes the extent to which individuals expect that what happens to them will be a consequence of their own behavior (internal locus of control) or of external factors, such as luck, fate, or other people (external locus of control). An external orientation can serve a defensive purpose by lessening the sense of responsibility an individual has for what happens.

The present research was conducted to study the possible interaction of the variables described above on a behavioral measure of avoidance, designated as reinforcement avoidance. The latter was operationally defined as choosing a response that has no previous history of reinforcement over a response that has been reinforced. Three types of reinforcement avoidance were investigated: (a) avoidance of a response previously associated with both reward and punishment, (b) avoidance of a response that received reward only, and (c) avoidance of a previously punished response. Four groups of subjects, representing four combinations of the independent

variables motive to avoid success (MAS) and internal (ILC) versus external (ELC) locus of control were studied, as follows. Group 1--Low MAS and ILC; Group 2--Low MAS and ELC, Group 3--High MAS and ILC, and Group 4--High MAS and ELC.

The hypothesis guiding this investigation was that reinforcement avoidance could be predicted from the interaction of the above two personality variables plus consideration of the type of reinforcement. If avoidance is conceptualized in terms of preference for rewards or punishments, persons with high MAS are likely to avoid reward more than punishment compared with persons low in MAS. However, when the interaction between MAS and LC is considered, the extent to which reinforcements are attributed to one's own behavior or to external factors is likely to either sensitize or suppress the individual's predisposition to avoid. The combination of high MAS and ILC is likely to result in the greatest degree of anxiety about and avoidance of success because success is attributed by such persons to their own behavior. In contrast, persons with high MAS and ELC are likely to experience less anxiety about achievement success, and therefore have less need to avoid it, because of their tendency to attribute the success to external factors rather than to themselves. In other words, the external orientation can serve a defensive purpose and therefore make actual success avoidance less likely in persons with an external locus of control than in persons with an internal orientation. Based on the above reasoning, the predictions were that Group 3 would avoid reward more than punishment and more than the other groups, and that Group 4 would avoid punishment more than reward and more than the other groups.

Method

Subjects were 48 college females who were selected from a larger pool of students because they scored either high or low on a story completion task, which was scored according to the scoring system developed to measure MAS (Horner, 1968), and on the Rotter I-E Scale (Rotter, 1966) which was used to measure LC. Twelve subjects were assigned to each of the four groups. Five additional subjects were omitted in the final analyses either because they did not complete the experiment or because they expressed disbelief in the purpose of the experiment and tasks presented to them.

To obtain the reinforcement avoidance scores, the pre-selected subjects were asked to participate in "a concept learning experiment consisting of three separate concept formation tasks". They were shown a series of different slides for each task with geometric figures that varied in color and size and were told to try to learn the concept associated with the figures. In reality, however, no concepts were represented by the series of figures and the concept learning structure was presented to arouse achievement motivation and to provide a vehicle for introducing differential reinforcement of two possible responses. After viewing each slide, the subjects were told to move a lever located in front of them either to the right or to the left, and were told that one of three consequences would occur: (a) reward, i.e., they might receive poker chips, which would add to a number they were given at the start of the experiment, (b) punishment, i.e., they might be asked to give up poker chips, or (c) neither reward or punishment. They were informed that the chips would be exchanged for money after the experiment was completed.

To give face validity to the concept learning structure of the experiment, after each of the three tasks subjects were asked to complete a questionnaire which presented questions about the concept they presumably were expected to learn.

A fixed partial reinforcement schedule was followed for each subject regardless of her actual responses. The procedure was as follows: One of the two possible responses (movement of the lever to the right or the left) was designated on a random basis as the target response for each subject, i.e., as the one which would receive reinforcement. The target response consisted of movement of the lever to the right for half the subjects, and to the left for the other half, to control for possible position preferences. The non-target response was never followed by reinforcement. Movement of the lever in the direction that was never reinforced was considered a reinforcement avoidance response. Based on the prearranged reinforcement schedule, all subjects received a fixed partial reinforcement sequence and number of reinforcements during the training phase of each of the three tasks. However, the actual number of trials, or slides presented, varied for each subject since the more frequently the non-target response was made, the larger the number of trials required to reach the pre-established number of reinforcements. After the subject received the required number of reinforcements, without informing her of any change, ten additional post-training trials were held during which no further reinforcements were given. This procedure allowed for two scores of response avoidance for each of the three tasks: (1) a ratio of the total number of non-target or avoidance responses made over the total number of trials during the training

phase, and (2) the number of non-target or avoidance responses made during the post-training non-reinforcement phase.

The three separate tasks were used to introduce three different reinforcement conditions, to which all subjects were exposed. The first condition for all subjects consisted of a fixed partial reinforcement schedule of both reward and punishment of the target response. The purpose of starting all subjects with this reinforcement condition was to provide them with an equal baseline of reinforcement in this situation. The reward only condition and the punishment only condition, which followed, were counterbalanced so that half of the subjects in each experimental group received reward on the second task and punishment on the third, with the reverse order for the other half of the subjects.

Six dependent measures were obtained for each subject consisting of a training ratio and a post-training score for (a) avoidance of a response previously rewarded and punished, (b) avoidance of a response rewarded only, and (c) avoidance of a response punished only. Analyses of data consisted of three-way analyses of variance with two between-subject factors, high and low MAS and ILC versus ELC, and one within-subject factor, reinforcement conditions. The significance of mean differences was tested with Duncan's multiple range test (Duncan, 1955).

Results

The ANOVA on training ratio scores indicated a significant three-way interaction, F (2,88) = 14.69, p .01. None of the single factors or two-way interactions were significant. The mean training ratio scores

are shown in Table 1 for each group for each of the reinforcement conditions. The higher the ratio score, the more frequently the subject avoided the reinforced response relative to total number of trials.

Insert Table 1 about here

As predicted, the high MAS and ILC group, Group 3, avoided reward significantly more than punishment, whereas the high MAS and ELC group, Group 4, avoided punishment more than reward. Group 3 avoided reward more than the low MAS and ILC groups, but was not significantly different that the other groups. Group 4 avoided punishment more than Group 2 and Group 3.

Results on avoidance scores on the post-training trials were similar to those on training ratio scores. The ANOVA on post-training scores indicated a significant three-way interaction, F (2, 88) = 4.14, p .05. In addition, a significant two-way interaction between LC and reinforcement conditions was found, F (2, 88) = 5.79, p .01. Other possible two-way interactions and single factors were not significant. Table 2 shows the mean post-training scores for each group for each of the reinforcement conditions. Consistent with the findings for training ratio scores, Group 3 avoided reward significantly more than punishment, while the reverse was true for Group 4.

Insert Table 2 about here

Group 3 also avoided reward more than all other groups.

Tests for mean differences for the two-way interaction between LC and reinforcement conditions indicated two significant mean differences: subjects with ELC avoided reward significantly less than punishment (Reward $\underline{M}$ = 3.62, Punishment $\underline{M}$ = 5.17) and significantly less than ILC subjects (ELC $\underline{M}$ = 3.62, ILC $\underline{M}$ = 5.54).

The groups did not differ from one another on the initial reinforcement condition, where the target response was both rewarded and punished, on either the training ratio or post-training avoidance scores.

Discussion

The results support the predicted interaction between MAS, LC, and reinforcement conditions, and the mean differences generally were in the predicted directions. To the extent that the reward avoidance measures used in this study can be generalized to success avoidance in other achievement situations, the findings indicate that prediction of the actual avoidance of successful achievement is increased by considering both variables, MAS and LC. These findings are consistent with the hypothesis presented previously that high MAS subjects with ELC are able to defend against the anxiety they associate with successful achievement more than ILC subjects. By attributing the reasons for their success to external factors, the anxiety about success of high MAS, ELC subjects is lessened or suppressed, and they are more concerned with avoiding punishment or failure than with avoiding success. In contrast, ILC sensitizes high MAS subjects to the anxiety they associate with success because they attribute the success to their own behavior, and therefore they avoid reward more than punishment.

The significant interaction on the post-test between LC and reinforcement conditions suggests that some prediction of reinforcement avoidance is possible using the variable locus of control alone. The finding that ELC subjects avoided punishment more than reward, and avoided reward less than ILC subjects, may be explained by the uncertainty resulting from their expectancy that outcome on achievement tasks is caused more by external factors than by their own abilities and efforts. Attributing outcome to unknown external factors is likely to foster greater uncertainty and anxiety about possible success than is experienced by ILC subjects. The behavior of ELC subjects of maximizing reward and minimizing punishment may represent a defensive, self-protective posture in the face of uncertainty about the outcome of their achievement efforts.

While no significant differences in avoidance were found between the high and low groups in MAS, some variation exists when the training ratio scores and the post-training scores are compared which suggests an important difference between these groups. The low MAS groups differed in their avoidance of reward and punishment on the ratio avoidance measure during actual training, but these differences disappeared on the later post-measure. In contrast, the groups high in MAS differed in their avoidance of reward and punishment on both measures. This difference suggests that the influence of high MAS on behavior is more stable or persistent than low MAS. In other words, a high standing on motive to avoid success may represent a personality disposition which has impact over a longer period of time and is less influenced by changes in the situation than is true of a low standing. If this interpretation is correct, it suggests that efforts to manipulate or bring about changes in persons high in MAS will be more difficult than in persons low in MAS.

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Table 1

Training Ratio Avoidance Scores for Motive to Avoid Success and Locus of Control Groups on Three Reinforcement Conditions

Groups	Reward and punishment	Reward only	Punishment only
1--Low MAS, Internal LC	.446	.398	.561
2--Low MAS, External LC	494	.543	.446
3--High MAS, Internal LC	.525[b]	.578	.381
4--High MAS, External LC	.558	.476	.666[a]

[a].666 is significantly different from .525 and below.

[b].525 and above are signicantly different from .398 and below.

Table 2

Post-training Avoidance Scores for Motive to Avoid Success and Locus of Control Groups on Three Reinforcement Conditions

	Avoidance Scores		
Groups	Reward and punishment	Reward only	Punishment only
1--Low MAS, Internal LC	4.25	4.50	5.00
2--Low MAS, External LC	5.42	4.17	5.17
3--High MAS, Internal LC	5.75[b]	6.58[a]	3.58
4--High MAS, External LC	4.67	3.08	5.17[c]

[a] 6.58 is significantly different from 4.50 and below.

[b] 5.75 and above are significantly different from 3.58 and below.

[c] 5.17 and above are significantly different from 3.08.